

6. SARCOCYSTIS COULD BE A THREAT TO BARASINGHA, *CERVUS DUVAUCELI BRANDERI*

Sarcocystosis has come to be recognised comparatively recently as a serious disease of practically all categories of domestic animals throughout the world (Dubey *et al.* 1989) including India (Shah and Chaudhry, 1994). This disease is named after the protozoan genus *Sarcocystis*, some of whose species cause considerable morbidity (including abortion) and mortality especially in young animals like sheep, goat, cattle and pig (Levine, 1985).

Sarcocystis has a typical coccidian life-cycle with one exception in that it involves two hosts having prey-predator relationship. Herbivores and omnivores act as prey animals in which the asexual stages of the parasite develop. This includes the most commonly encountered stage through which this infection is largely recognised which is known as the "sarcocyst". Since this stage occurs as a cyst mostly in the cardiac and striated muscles of the infected animals, the predators (carnivores) acquire this infection by feeding on the infected muscles. Now the parasite in the carnivorous host remains confined to the small intestine and results in the formation of sporocysts enclosing four sporozoites, i.e. it undergoes sexual reproduction. The sporozoites are voided in the faeces of the predators in large numbers and remain viable in the open for a considerable period of time because of the protective wall of the sporocyst. Prey animals pick up these sporozoites while grazing. Thus the life-cycle is linked between the two hosts. However, hardly

any attention has been paid in India, (unlike some countries of America, Europe and Africa) to this infection in the wild. The present note is probably the first report of *Sarcocystis* infection in barasingha (*Cervus duvauceli branderi*) which is a hard ground swamp deer found only in Kanha National Park, M.P., India.

An adult female barasingha was found dead in the Kanha National Park, M.P. in the month of February 1994. Histopathological examination of various organs collected was conducted. Microscopic examination of the cardiac muscles revealed the presence of sarcocysts of *Sarcocystis* of varying sizes. The pathogenicity of this infection is quite evident in domestic animals and it is responsible for a great loss to the livestock industry in the form of abortion and mortality in young animals. The occurrence of *Sarcocystis* infection in barasingha suggests that it could be one of the reasons for the decline in the population of this threatened species. A detailed study is needed to determine the prevalence and effect of this infection on the existing population of barasingha.

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